

IN THE CLAIMS

Please amend Claims 128 and 137-140. The following is a complete listing of claims and replaces all prior versions and listings of claims in the present application:

1. - 124. (Canceled)

125. (Previously Presented) The apparatus according to claim 137, further comprising a sending unit for sending the coordinate data calculated by said calculation unit.

126. and 127. (Canceled)

128. (Currently Amended) The apparatus according to claim 137, wherein the plurality of vector data ~~can include~~ includes vector data indicating a straight line and vector data indicating a curve of second or higher degree for one outline point in the same character space.

129. (Previously Presented) The apparatus according to claim 137, further comprising an output unit adapted to output a pattern formed based on the coordinate data calculated by said calculation unit.

130. (Previously Presented) The apparatus according to claim 129, wherein said output unit includes a printer.

131. (Canceled)

132. (Previously Presented) The apparatus according to claim 137, wherein said storage unit stores degree information indicating degree of a function of vector data for the x direction and the y direction independently.

133. (Previously Presented) The apparatus according to claim 129, wherein the degree information includes an information indicating that coordinate data is constant regardless of the change of weight value.

134. - 136. (Canceled)

137. (Currently Amended): An outline processing apparatus, comprising:  
a storage unit configured to store coordinate values of a plurality of outline points of a character corresponding to a character code, and a plurality of vector data corresponding to each of the plurality of outline points, wherein each of the plurality of vector data includes x vector data and y vector data that indicates moving amounts in x and y directions of the corresponding outline point, respectively, and wherein at least one outline point of the plurality of outline points has different vector data in conjunction with weight value in the same character size at least one of x and y vector data that changes in accordance with a weight value change of the character, where the character size remains the same;

a receiving unit configured to receive a character code and a weight value;  
a reading unit configured to read out coordinate values of the plurality of outline points corresponding to the received character code from said storage unit;  
an acquisition unit configured to acquire the x and y vector data corresponding to the coordinate values and the weight value read by said reading unit; and  
a calculation unit configured to convert the coordinate values read by said reading unit based on the x and y vector data acquired by said acquisition unit, wherein an x-coordinate value of the coordinate values does not change if the x vector data were not acquired, and a y-coordinate value of the coordinate values does not change if the y vector data were not acquired.

138. (Currently Amended): An outline processing method, comprising the steps of:

storing, in a storage unit, coordinate values of a plurality of outline points of a character corresponding to a character code, and a plurality of vector data corresponding to each of the plurality of outline points, wherein each of the plurality of vector data includes x vector data and y vector data that indicates moving amounts in x and y directions of the corresponding outline point, respectively, and wherein at least one outline point of the plurality of outline points has different vector data in conjunction with weight value in the same character size at least one of x and y vector data that changes in accordance with a weight value change of the character, where the character size remains the same;

receiving a character code and a weight value;

reading out coordinate values of the plurality of outline points corresponding to the received character code from the storage unit;

acquiring the x and y vector data corresponding to the coordinate values and the weight value read in said reading step; and

converting the coordinate values read in said reading step based on the x and y vector data acquired in said acquiring step, wherein an x-coordinate value of the coordinate values does not change if the x vector data were not acquired, and a y-coordinate value of the coordinate values does not change if the y vector data were not acquired.

139. (Currently Amended): A computer program product, comprising computer-readable codes adapted to cause a programmable computer to perform an outline method, said method comprising the steps of:

storing, in a storage unit, coordinate values of a plurality of outline points of a character corresponding to a character code, and a plurality of vector data corresponding to each of the plurality of outline points, wherein each of the plurality of vector data include x vector data and y vector data that indicates moving amounts in x and y directions of the corresponding outline point, respectively, and wherein at least one outline point of the plurality of outline points has different vector data in conjunction with weight value in the same character size at least one of x and y vector data that changes in accordance with a weight value change of the character, where the character size remains the same;

receiving a character code and a weight value;

reading out coordinate values of the plurality of outline points corresponding to the received character code from the storage unit;

acquiring the x and y vector data corresponding to the coordinate values and the weight value read in said reading step; and

converting the coordinate values read in said reading step based on the vector data acquired in said acquiring step, wherein a x-coordinate value of the coordinate values does not change if the x vector data were not acquired, and a y-coordinate value of the coordinate values does not change if the y vector data were not acquired.

140. (Currently Amended): A computer-readable memory medium, storing computer-readable codes adapted to cause a programmable computer to perform an outline method, said method comprising the steps of:

storing, in a storage unit, coordinate values of a plurality of outline points of a character corresponding to a character code, and a plurality of vector data corresponding to each of the plurality of outline points, wherein each of the plurality of vector data includes x vector data and y vector data that indicates moving amounts in x and y directions of the corresponding outline point, respectively, and wherein at least one outline point of the plurality of outline points has different vector data in conjunction with weight value in the same character size at least one of x and y vector data that changes in accordance with a weight value change of the character, where the character size remains the same;

receiving a character code and a weight value;

reading out coordinate values of the plurality of outline points corresponding to the received character code from the storage unit;

acquiring the x and y vector data corresponding to the coordinate values and the weight value read in said reading step; and

converting the coordinate values read in said reading step based on the vector data acquired in said acquiring step, wherein an x-coordinate value of the coordinate values does not change if the x vector data were not acquired, and a y-coordinate value of the coordinate values does not change if the y vector data were not acquired.